ORDINANCE NO. 2025-_____

AN ORDINANCE BY THE CITY COMMISSION OF THE CITY OF TEXAS CITY, TEXAS, AMENDING THE TEXAS CITY CODE OF ORDINANCES BY CREATING CHAPTER 162 ENTITLED "BATTERY ENERGY STORAGE SYSTEMS" AND AMENDING THE CODE OF ORDINANCES TITLE XV ENTITLED "LAND USAGE", CHAPTER 160 ENTITLED "ZONING" AND PROVIDING FOR PUBLICATION AND AN EFFECTIVE DATE

WHEREAS, the City of Texas City, Texas, is authorized to regulate ordinances pursuant to the Texas Local Government Code;

WHEREAS, the City Commission of the city of Texas City, Texas, needs to amend the Texas City Code of Ordinance Title XV Entitled "Land Usage," to CREATE Chapter 162 entitled "Battery Energy Storage Systems" and to AMEND Chapter 160 – Zoning to add Battery Energy Storage Systems (BESS) and similar uses as a Use restricted to the District S-P Site Plan zoning classification;;

WHEREAS, pursuant to TEX. LOCAL GOV'T. CODE § 211.001 *et seq*., the city of Texas City, Texas, is authorized to adopt zoning regulations for the purpose of promoting the public health, safety, morals, or general welfare and protecting and preserving places and areas of historical, cultural, or architectural importance and significance; and

WHEREAS, the City's Planning Board and Zoning Commission have reviewed and recommended the adoption of this ordinance at meetings held on _____; and

WHEREAS, the City Commission determines that creating Title XV, Chapter 162 entitled "Battery Energy Storage Systems" and amending Title XV, Chapter 160, "Zoning" to restrict Battery Energy Storage Systems and similar uses to the District S-P Site Plan zoning classification will promote the health, safety and welfare of the City;

NOW, THEREFORE BE IT ORDAINED BY THE CITY COMMISSION OF THE CITY OF TEXAS CITY, TEXAS, THAT:

Section 1. The above and foregoing recitals are hereby found to be true and correct and are incorporated herein as findings of fact. The City Commission hereby further finds and determines that this ordinance's rules, regulations, terms, conditions, provisions, and requirements are reasonable and necessary to protect public health, safety, and quality of life.

Section 2. That City of Texas City's Code of Ordinances Chapter 162 – Entitled " Battery Energy Storage Systems" is hereby created and established in Title XV Land Usage as indicated in Exhibit A, which is attached and incorporated into this ordinance.

Section 3. The City of Texas City's Code of Ordinances, Chapter 160 - Entitled "Zoning," Sec. 160.051. District S-P, Site Plan is amended to add the following:

Sec. 160.051 District S-P, Site Plan

(C) Uses.

(1) Uses and reasons for classification. The following uses are included under District S-P due to the following reasons:

(b) Uses restricted to District S-P

(14) Battery energy storage systems (BESS) and similar projects.

a. Basic zoning district most closely comparable to this requested principal use is District F – Light Industrial. However, due to the unique characteristics of these projects, potential hazards, environmental concerns, and long-term impacts, the site-specific review required for District SP is warranted and required in all districts, including District F. Planning Board and Zoning Commission and City Commission shall each have broad discretion to consider any and all aspects of the development and its intended use and operation in the interest of promoting the public health, safety, order, convenience, prosperity and general welfare; to protect and conserve the value of land and buildings in the area; and, to minimize conflicts among the uses of land and buildings.

b. Location in, near, or adjacent to existing residential uses or districts is not favored and shall be avoided.

c. BESS projects shall be located at least one half mile from any existing or planned use for vulnerable populations such as schools, daycare centers, assisted living and nursing homes, hospitals, elderly or supportive housing.

d. Site Plans shall comply with the requirements of Chapter 162 Battery Energy Storage Systems.

Section 4. This ordinance shall be cumulative of all provisions of the City of Texas City, Texas, except where the provisions of this Ordinance are in direct conflict with the provisions of such Ordinances, in which event the more restrictive provision shall apply.

Section 5. It is hereby declared to be the intention of the City Commission of the City of Texas City that the phrases, clauses, sentences, paragraphs, and sections of this Ordinance are severable, and if any phrase, clause, sentence, paragraph or section of this Ordinance should be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionality shall not affect any of the remaining phrases, clauses, sentences, paragraphs or sections of this Ordinance, since the same would have been enacted by the City Commission without incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph or section.

Section 6. All rights and privileges of the City of Texas City are expressly saved as to any and all violations of the provisions of any Ordinances affecting land use or development, which have accrued at the time of the effective date of this Ordinance; and, as to such accrued violations and all pending litigation, both civil and criminal, whether pending in court or not, under such Ordinances, same shall not be affected by this Ordinance but may be prosecuted until final disposition by the courts.

Section 7. That this Ordinance shall be read on three (3) separate days and shall become effective upon its final reading, passage, and adoption.

Section 8. That this Ordinance shall be finally passed upon the date of its introduction and shall become effective from and after its passage and adoption and publication by caption only in the official newspaper of the City of Texas City, Texas.

PASSED ON FIRST READING this ____ day of February 2025.

_____
Dedrick D. Johnson, Sr., Mayor
City of Texas City, Texas

ATTEST:

_____
Rhomari D. Leigh
City Secretary

PASSED ON SECOND READING this _____day of March 2025.

_____
Dedrick D. Johnson, Sr., Mayor
City of Texas City, Texas

ATTEST:

_____
Rhomari D. Leigh
City Secretary

PASSED AND FINALLY ADOPTED this____ day of March 2025.

_____

Dedrick D. Johnson, Sr., Mayor
City of Texas City, Texas

ATTEST:

_____
Rhomari D. Leigh
City Secretary

APPROVED AS TO FORM:

_____
Kyle L. Dickson
City Attorney

Exhibit A to Ordinance 2025-____

Texas City Code of Ordinances

Title XV Land Usage

Chapter 162 Battery Energy Storage Systems

Battery Energy Storage Systems

a. Purpose. The purpose of this Chapter is to establish regulations for Battery Energy Storage System (BESS) and similar project sites with the following objectives:

1. Ensure the health, safety, and welfare of the community.
2. Provide a regulatory scheme for the designation of properties suitable for the location, construction, and operation of BESS sites.
3. Mitigate any negative impacts of BESS sites.
4. Provide regulations for current and existing BESS sites.

b. Definitions.

1. ***Battery Energy Storage System (BESS)*** means one or more devices (i.e. group of batteries), assembled together capable of storing energy in order to supply electrical energy at a future time. BESS facilities receive electricity from the electrical grid when there is excess electrical power, store it in a series of batteries and then return it to the grid when additional electricity is needed during high demand.

2. ***Battery Analytics Software*** means a cloud-based software solution using energy storage system (ESS) raw data collected by the Battery Management System (BMS) and applies physics-based algorithms to offer immediate and predictive detection, (on the order of weeks and months), of thermal runaway and its associated root causes.

3 ***Similar projects*** means data centers and similar high energy demand installations which may or may not return energy to the grid. Applicability of this Chapter shall be determined by the Director of Engineering & Planning at the time of application.

c. Use Classification

1. BESS facilities and similar uses shall be restricted to locations zoned in accordance with Chapter 160 – "Zoning," Sec. 160.051, District S-P – Site Plan.

2. Installations shall be unmanned – to avoid the mixing of incompatible uses onsite office or shop facilities shall be prohibited. This prohibition is not intended to limit the occasional intermittent temporary access by personnel with knowledge and training about the hazards as necessary for the maintenance of the installations.

d. BESS Development Plan Application Requirements.

1. *Application Fee:* A $5,000 fee is due at time of application submittal in addition to any other fees for zoning change, platting, building permits, or certificates of occupancy.

2. *BESS Development Plan requirements.* An application for a BESS site shall be submitted to the Engineering & Planning Department in the form of a BESS Development Plan. The regulations required for a BESS Development Plan are in addition to and are not in lieu of, permits required by any other provision of the Texas City Code of Ordinances or other governmental agency.

    a. The BESS Development Plan application for a BESS site shall include the following information:

        1. Site Plan indicating the distance between battery containers and distance from all adjacent property lines and structures.
        2. Landscaping and Screening Plan
        3. Elevations and Renderings/Illustrations
        4. Hazard Mitigation Analysis
        5. Plume Study
        6. Fire Management Plan
        7. Reimbursement Agreement for the payment of the City's third party expert and deposit in amount determined by the Director of Engineering & Planning.
        8. Applicants shall provide current contact information, operation experience, and record of fire incidents together for each of the following: the developer/operator, equipment manufacturer, Engineer, system operator, insurance, and on-site operations and maintenance.
        9. Such other information as the City deems reasonably necessary to administer this Chapter.

e. Site Reviews and Inspections

1. The City will contract with a 3rd party expert to review all BESS sites for compliance with applicable life/safety requirements. The 3rd party expert shall provide the following deliverables for each site:

    a. General Safety Analysis of the proposed site.

    b. Review to confirm compliance with IFC and NFPA regulations.

    c. Review of building permit.

    d. Inspections are conducted during construction, and a final inspection is performed prior to operations commencing.

    e. Any other matters requested by the City.

2. The Applicant proposing the BESS site shall execute a reimbursement agreement with the City for all costs incurred by the third-party expert and provide a deposit in an amount determined by the Director of Engineering & Planning. The Applicant shall maintain a positive balance of funds on deposit for the reimbursement of the third-party expert fees. Any unexpended funds remaining on deposit six (6) months after the site receives an unconditional Certificate of Occupancy shall be refunded to the Applicant.

3. The City's Fire Marshal's office will be involved in all plan reviews, construction, and inspections to ensure compliance with Fire Department requirements.

f. Fire and life safety. BESS sites are required to meet, but are not limited to, the following fire codes and actions, as amended and updated:

1. 2024 IFC and the listed NFPA references within the IFC including any and all local amendments.

2. NFPA 855 (2023): Standard for the Installation of Stationary Energy Storage Systems. The most current version adopted by the City shall apply.

3. Provide an environmental site plan that includes a firefighting water containment plan.

4. There shall be an air monitoring system for vapor detection to the satisfaction of the Fire Chief and Fire Marshal.

5. Provide a water fire flow analysis at the permitting phase to ensure the existing water infrastructure can support the firefighting demands.

6. Provide the Fire Department with the equipment needed to monitor and test the air and water for any hazards at these sites during emergencies. All monitoring equipment shall be provided to the Fire Department by the BESS applicant to the satisfaction of the Fire Chief and Fire Marshal.

7. Provide annual training to the Fire Department and mutual aid agencies for hazards and responses related to BESS systems.

8. Furnish all necessary firefighting equipment, related to the proposed BESS site, to the City's Fire Department, ensuring it meets the approval of the Fire Marshal.

9. The fire command center and water supply should be situated at a safe distance from the closest BESS enclosure, based on deflagration data that indicates how far away is considered safe. The minimum distance should be 100 feet, as per NFPA requirements, unless approved otherwise by the Fire Marshal.

10. The fire service command center shall be sheltered from the weather and have an overhang to reduce glare on the command center and allow emergency personnel to work under and review all emergency response plans and information needed to bring the incident under control.

11. All BESS sites shall adhere to any additional requirements and/or safety items set forth by the most current version of NFPA and IFC, specifically addressing ESS sites if 25% or more batteries are replaced or added to the site/containers.

12. Any incidents that exceed a 12-hour working period shall require a third-party hazardous materials team to respond to help control/monitor them for the duration of the event.

13. The City's Public Works approved water meters shall be installed on-site to monitor how much water is used during emergency responses to BESS sites.

14. A documented plan if an exhaust fan fails to work during an emergency.

g. Emergency Response Plan. A copy of the approved Emergency Response Plan shall be given to the system owner, the Fire Department, mutual aid agencies, and the Emergency Management Department. The Emergency Response Plan shall be approved by the City prior to the BESS being installed on the site. The Emergency Response Plan shall at a minimum include the following:

1. Procedures for safe shutdown, de-energizing, or isolation of equipment and systems under emergency conditions to reduce the risk of fire, electric shock, and personal injuries, and for safe start-up following cessation of emergency conditions.

2. Procedures for inspection and testing of associated alarms, interlocks, and controls.

3. Procedures to be followed in response to notifications from the Battery Energy Storage Management System, when provided, that could signify potentially dangerous conditions, including shutting down equipment, summoning service and repair personnel, and providing agreed upon notification to fire department personnel for potentially hazardous conditions in the event of a system failure.

4. Emergency procedures to be followed in case of fire, explosion, release of liquids or vapors, damage to critical moving parts, or other potentially dangerous conditions. Procedures can include sounding the alarm, notifying the fire department, evacuating personnel, de-energizing equipment, and controlling and extinguishing the fire.

5. Response considerations similar to a safety data sheet (SDS) that will address response safety concerns and extinguishment.

6. Procedures for dealing with battery energy storage system equipment damaged in a fire or other emergency event, including maintaining contact information for personnel qualified to safely remove damaged battery energy storage system equipment from the facility.

7. Other procedures as determined necessary by the Fire Chief and Fire Marshal to ensure the safety of occupants, neighboring properties, and emergency responders.

8. Procedures and schedules for conducting drills of these procedures and for training local first responders on the contents of the plan and appropriate response procedures.

9. A mitigation plan indicating actions for post-event response and clean-up. Should an event occur, preventative action must be completed (with corrective action report) to prevent reoccurrence.

10. Provide a list of emergency contacts that shall be updated annually or when significant changes are made, whichever is earlier.

11. A documented plan for natural disasters and/or extreme environmental conditions such as high ambient temperatures and/or humidity, including how flooding or brackish water would affect the BESS devices if compromised and emergency procedures for mitigating the negative effects of such scenarios. How does the site ensure in the event of an emergency that the BESS site is not contaminating the ground or source water?

h. Setbacks and Location and Area Regulations

1. BESS Systems shall meet the minimum setback requirements established in their respective zoning district.

2. A BESS site shall be no closer than 1,500 feet perpendicular in any direction from another BESS site measured at the perimeter fence.

3. The setback requirement for a BESS site perimeter fence shall be the greater of either:

   a. A minimum of 200 feet from the nearest property zoned for single-family uses or school; or

   b. A setback distance required based on Plume modeling and testing data.

4. Additional setbacks may be considered based on proximity to underground pipelines, railroad tracks, and overhead utilities.

5. Increased setbacks may be recommended by the Planning Board or Zoning Commission to the City Commission on a case-by-case or site-by-site basis.

6. Spacing of on-site containers shall be a minimum of 15ft when submitted for the Development Plan approval and/or any zoning change. At the time of building permitting, on-site container spacing may be determined by a Hazard Mitigation Analysis relying on data produced by the UL 9540A Fire Testing required in Section 3.14.19.k.2. upon recommendation of the City's third party expert with the approval of the Fire Marshal and Chief Building Official.

7. All driveways, driving areas, and any area subject to vehicle movement shall be paved. Parking areas and laydown yards shall be paved as necessary to provide access, avoid rutting, and prevent noxious dust from affecting adjacent and nearby areas. Consideration shall be given to maintaining the quality and value of the area for future development of adjacent and nearby properties.

8. Containment of runoff shall be in accordance with state and local regulations and shall protect the public surface water supply and drainage system from the runoff of any contaminants into the water supply or drainage system.

9. Preference will be given to sites that are not adjacent to or within 300 feet of a roadway classified as an arterial or higher.

i. Landscaping and Screening. The BESS site shall comply with the following landscaping and screening requirements. Additional requirements may be imposed as a result of the SUP.

1. The BESS installations shall be fully screened from visibility on any and all gateway or thoroughfare and/or adjacent streets and shall have and maintain substantial landscaping of at least 15% or more as recommended by the Planning Board.

2. A masonry wall, at least the height of the containers, shall be installed around the perimeter of the facility. Where adjacent to surrounding communities, the screening wall shall match existing walls in style and material to the greatest extent possible.

3. The masonry wall shall be designed to withstand a blast door from a BESS container striking it.

4. A continuous hedge shall be installed adjacent to the masonry wall. Planning Board may consider the minimum landscaping requirement to be at least one large shrub capable of reaching a minimum height of four feet for each eight linear feet of required screening fence and one street tree for each 50 feet of required screening fence, provided that, not less than one street tree and three large shrubs are provided for each site. The Planning Board may apply a greater standard as it finds appropriate based on the location and characteristics of the particular site.

5. At least 50% of the site shall be pervious. All pervious areas shall be landscaped and maintained in accordance with Section 160.088 of this chapter. The Planning Board may recommend approval conditioned upon a site-specific higher standard.

j. Noise. If a BESS site is located within 500 feet of a property zoned for single-family use, a noise study shall be provided indicating that noise level shall not exceed an ambient level measured at the single-family property line.

k. Remote Monitoring. All BESS sites shall have a redundant 24/7 site monitoring system (approved supervising station) to detect and prevent thermal runaway. The system shall be subject to the following requirements:

1. The system shall have detectors for temperature, gases, and smoke installed.

2. System alerts and detection warnings of a potential thermal runaway, smoke detector activation, or gas detector activation shall be sent to local emergency services (Fire and Police Departments), site and remote operators, and owners.

3. Alerts and detections of a potential thermal runaway, smoke detector activation, or gas detector activation shall trigger BESS unit shutdown and exhaust fan initiation at a minimum.

4. All critical safety systems and remote monitoring systems shall have a secondary source of power in the event of a power failure.

5. A plan shall be provided showing the capability of providing battery backup power for as long as it takes for a permanent (generator) power source to be put in place. The company shall send its backup power plan to the Fire Marshal's office at time of permitting for review. The plan shall explain how they will sustain emergency backup power until normal power is restored, especially during a natural disaster.

6. For additional safety and redundancy of a commercial energy storage system (ESS) installation, a Battery Analytics software system shall be required to monitor the data produced by the Battery Management System (BMS). Indications of a potential failure shall be immediately transmitted to the energy storage system operator and to the fire department.

l. Listing and Testing of Site. The following standards are applicable to the listing and full-scale testing of stationary energy storage systems. The City may accept battery systems listed and tested to later editions of these standards when necessary to address evolving standards applicable to a rapidly developing technology.

1. Listing. All stationary energy storage systems shall be tested and listed by a nationally recognized testing laboratory to the following standards:

a. Underwriters Laboratories (UL) Standard 1741, entitled "Inverters, Converters, Controllers and Interconnection System Equipment for Use with Distributed Energy Resources;"

b. Underwriters Laboratories (UL) Standard 1973, entitled "Batteries for Use in Light Electric Rail (LER) Applications and Stationary Applications," and

c. Underwriters Laboratories (UL) Standard 9540, entitled "Energy Storage Systems and Equipment."

d. Underwriters Laboratories (UL) Standard 1642, entitled "Standard for Lithium Batteries."

2. Full-scale testing. Stationary energy storage systems shall be tested to Underwriters Laboratories (UL) Test Method 9540A, entitled "Safety Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems," or other approved standard or test data; and shall be subjected to a large- scale destructive fire test of a complete BESS.

m. Supervision of Site. A stationary energy storage system shall be operated and maintained under the general supervision of a technical expert held to the following standards:

1. Be trained and knowledgeable in the installation, maintenance, and operation of the battery system, such as a person engaged in the design or installation of such systems;

2. Possess the manufacturer's installation, specifications, ratings, listing, and operating specifications for each battery system and any associated fire protection systems;

3. Immediately report any emergency condition affecting a battery system to the Fire Department; and

4. Provide technical assistance about the stationary energy storage system installation to the Fire Department and, in coordination with the energy storage management system monitoring facility, identify a subject matter expert (such as a representative of the manufacturer) who can provide technical assistance

about the battery's design and performance in the event of an emergency condition affecting the battery system.

n. Event Response. If City employees respond to an incident at the site; the operator of the BESS site shall adhere to the following requirements:

1. A technical expert, as described in 3.14.19.1., must be on-site within one hour of any remote monitoring alert.

2. All City costs associated with the incident must be reimbursed at a rate specified by the City.

3. Any third-party response requested by the City or TCFD will be at the cost of the property owner. (Hazardous materials company, Specialized fire equipment, F-500 encapsulating agent, air monitoring, or other city assets).

o. Insurance. The operator of the BESS site shall provide and maintain, as current, a certificate of liability insurance in form and content satisfactory to the City Engineer and City Attorney. The City shall be named as an Additional Insured.

p. Flood Risks. BESS shall not be installed in a FEMA designated Special Flood Hazard Area or other site with known history of flooding or drainage issues.

q. Decommissioning.

1. Upon the ceasing of operations or the end of life of the facility, whichever comes first, the site shall be decommissioned based on the following criteria:

   a. The owner shall notify the city, the Fire Chief, and the Fire Marshal before any work is started.

   b. All above and below ground features (i.e. containers, underground utilities, foundations, gravel, etc.) shall be removed from the site with the exception of the

drainage improvements and access road. The site shall be returned to its natural pre-construction ground state.

c. All material removed from the site shall be disposed, reused, and recycled in accordance with state and federal requirements.

d. Any adverse substances that may have entered the ground during the course of operations shall be removed from the property and properly disposed of.

2. Prior to the City's authorization to operate the facility, the Applicant shall:

a. Provide a Decommissioning Bond, with the Applicant as the Principal and the instrument shall run to the City, as obligee, and shall become effective on or before the beginning of operations at the site and shall remain in force until the property is fully decommissioned. The amount shall be based on a Professional Engineer's signed and sealed estimate of current costs to decommission the site, at build-out, with an adjusted inflation rate based on the average CPI over the last 10 years from the U.S. Bureau of Labor Statistics.

r. ***On-site Signage.*** The operator of the BESS site shall post in a conspicuous location at the entrance to the facility a sign subject to the following regulations:

1. The sign shall be reflective and weatherproof and shall be placed at all entrance gates to the facility, as well as on the entrance to any buildings that may house any components of the BESS.

2. Lettering shall be a minimum letter height of 3/8" permanently affixed.

3. The sign shall display the following information:

a. 24/7 Contact Information.

b. Types of technology associated with the BESS.

c. Any special hazards associated with the BESS.

d. Type of suppression system installed.

e. Disconnect and other emergency shutoff information.

f. Command Center location.

4. The sign shall be inspected annually to ensure its structural integrity and to determine if any additional information is required.

s. Plume Modeling. To determine the potential toxic risk to those in proximity to the BESS, including responding firefighters, a plume analysis shall be performed. The plume analysis shall utilize appropriate modeling to evaluate worst-case scenarios with varying weather conditions and toxic gas release rates. The plume study shall address toxicity hazards based on toxic gases expected to be released based on gas composition measurements from the cell and module level testing pursuant to UL9540A or other testing. The plume analysis shall include battery failures with both flaming and non-flaming scenarios. These scenarios should be based on results from relevant tests such as UL 9540A tests and include modeling of a full propagation event involving an entire BESS enclosure. The modeling of multiple BESS enclosure failures shall not be required except where testing or analysis indicates that this is to be reasonably expected. Model assumptions, techniques, results, and a summary document shall be provided in a report. The plume study shall be conducted by a qualified firm with experience in plume modeling for battery energy storage systems. The city shall commission the plume model and all costs incurred by the City shall be fully reimbursed by the BESS applicant.

t. Partnership Agreement. Prior to the issuance of a building permit, the applicant shall enter into a Payment in Lieu of Taxes Agreement or similar agreement with the City to compensate the local taxing authorities for the loss in tax revenue attributable to depreciation and/or other factors.

u. Transfer of Ownership. The Applicant shall provide written notification to the Engineering & Planning Department at least thirty (30) days prior to any change in ownership of a BESS. A change in ownership includes any kind of assignment, sale, lease, transfer, or other conveyance of ownership or operating control of the applicant, the BESS, or any portion thereof. The Applicant or successors-in-interest or assignees shall remain liable for compliance with all conditions, restrictions and obligations contained in the approved Development Plan, the provisions of this

Ordinance, and applicable City, state, and federal laws.